

GEOGRAPHIC NEWS BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated under the Federal law as a non-commercial institution for the increase of geographic knowledge and its popular diffusion.)

General Headquarters, Washington, D. C.



Contents for Week of January 14, 1935. Vol. XIII. No. 26.

1. Iraq Pipe Line Follows Age-Old Caravan Trails.
 2. Sea, Stratosphere, and Polar Ice Featured in 1934 Explorations.
 3. Reindeer Herd Ends Six-Year Trek.
 4. 1934 Saw Marked Changes in World's Governments.
 5. The Great Barrier Reef, Jig-saw Puzzle of Australia's Coast.
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Photograph by Iraq Petroleum Company

AN OIL PIPE SHARES AN HISTORIC TRADE ROUTE

Arab workers smearing the Iraq-to-Mediterranean pipe line with tar and wrapping it with asbestos felt before "burial" in the Syrian desert. This great conduit, dedicated this month, follows ancient commercial trails closed by the Turks, and reopened to world trade only after the World War (see Bulletin No. 1).

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic News Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers for one year upon receipt of 25 cents (in stamps or money order). Entered as second-class matter, January 27, 1922, at the Post Office at Washington, D. C., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized February 9, 1922.

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Iraq Pipe Line Follows Age-Old Caravan Trails

ONE of the world's largest oil fields—the Mosul, in northern Iraq, where ancient Assyrians stood in awe before burning rocks—now is linked directly with the Mediterranean Sea by one of the world's most spectacular pipe lines. The big conduit is being dedicated this month.

On a map of the Near East this newest of trade "routes" looks like a huge letter "Y," because it is really a double pipe line. Both tubes begin at Kirkuk, in northern Iraq, but 155 miles to the west, near the little desert village of Haditha, the two part company. One pipe strikes nearly due west 376 miles to Tripoli, in the French mandate of Syria; the other runs southwest along age-old caravan trails 463 miles to Haifa, in British-controlled Palestine.

More than 15,000 workmen have been engaged for nearly three years on this huge enterprise, carried out by American, British and French engineers. Although there are longer pipe lines in the United States, none of them have been laid under the difficult conditions that faced the builders of the Iraq-Mediterranean project.

Runs Through Lonely Deserts

Barren unpeopled deserts, differences in altitude from more than a half mile above sea level to 850 feet below sea level, wandering bands of hostile native tribesmen, total lack of railroads for transport, and only desert tracks for the huge motor trucks carrying pipe—these are a few of the problems faced by the men on the job.

Under a concession obtained from the Iraq Government, oil companies of four nations—the United States, France, the Netherlands, and Great Britain—will share profits in the enterprise. The new line is of greatest importance to France, which has no oil of its own.

The Mosul oil fields, source of the thick black fluid which will pour through the new line and into the holds of tank ships at Haifa and at Tripoli, is a rectangular area about 10 miles long and two miles wide, a short distance northwest of Kirkuk. Prospecting is still going on, and new wells are being sunk at regular intervals. The oil is piped from wells to the trunk line, and powerful pumps push it along the first stage of its journey. The big tubes pass under both the historic Tigris and Euphrates rivers, and then strike out into the dusty desert, a desolate region inhabited by wild nomadic tribes.

Zenobia's Desert Capital

The northern and southern lines branch near the village of Haditha; the northern line passing close to the ruins of Zenobia's desert capital, Palmyra, and thence over a mountain range 2,600 feet high to the valley of the Orontes, south of Homs. It reaches the Mediterranean three miles north of Chateau Raymond, of Crusader fame, to-day the port of Tripoli (see illustration, next page).

The southern section, after leaving Iraq, passes through territory under British Mandate. From Haditha it continues southwest to the high-walled stockade of famous Rutbah Wells, where travelers by air, motor car, and caravan following the old trade routes between East and West often halt for fuel, food, or lodging. Here stops, too, the palatial Damascus-to-Baghdad pullman bus, which, with its 65 feet of length, its 18 wheels, its buffet and bathroom, represents the largest motorized transport in the world. Its Diesel engines consume the crude product of the Mosul fields.

In Trans-Jordan the southern section traverses the lava country, one of the

Bulletin No. 1, January 14, 1935 (over).



THE BATHYPHORE RETURNS TO BERMUDA WITH A NEW DEPTH RECORD

In this strange steel ball Dr. William Beebe and Otis Barton were lowered 3,028 feet into the Atlantic last summer, during an expedition sponsored by the National Geographic Society and the New York Zoological Society. The giant liner *Queen of Bermuda*, outward bound for New York, salutes the expedition's achievement (see Bulletin No. 2).

Photograph from Dr. William Beebe

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Sea, Stratosphere, and Polar Ice Featured in 1934 Explorations

FROZEN areas of the Antarctic and the Far North; the sun-bathed but frigid stratosphere; the dark depths of the ocean; mazelike waterways near the tip of South America; and previously unscaled mountains—these furnished the major fields in which explorers made new discoveries and set up new records in 1934.

The only exploration of 1934 that may result in the addition of a large area of land to the United States was made by Rear Admiral Richard E. Byrd, in the Antarctic. On November 26 he flew over previously unseen portions of Marie Byrd Land, made a landing, and claimed for the United States an ice-covered territory estimated to be almost as large as Texas.

The flight disclosed that an indentation, which had been thought to be one end of a channel cutting Marie Byrd Land from the Antarctic Continent, ran inland only a short distance, and that beyond it was a plateau extending southward.

"Highs" and "Lows" of the Year

Within a period of twenty days last summer American explorers rose into the stratosphere 11¾ miles above sea level, and descended more than half a mile below the surface of the sea—the highest and lowest points reached during the year. The stratosphere flight was made July 28 over South Dakota and Nebraska by Major William E. Kepner, Captain Albert W. Stevens, and Captain Orvil A. Anderson, on an expedition under the joint auspices of the National Geographic Society and the U. S. Army Air Corps.

Deep dives into the sea were made August 11 and 15 by Dr. William Beebe and Otis Barton, in a steel ball, the Bathysphere, near the shores of Bermuda. The dives, sponsored by the National Geographic Society and the New York Zoological Society, reached depths of 2,510 and 3,028 feet respectively, both world records.

A second American stratosphere flight, made by Professor Jean Piccard and Mrs. Piccard, from Detroit, Michigan, October 23, reached an altitude of nearly 11 miles. Max Cosyns and M. Nérée van der Elst, in the only other stratosphere flight of the year by balloon, rose from Belgium, August 18, and reached an altitude slightly greater than 10 miles.

All three stratosphere expeditions obtained new and additional data in regard to cosmic rays. The National Geographic Society-Army Air Corps flight obtained the highest photographs ever made of the surface of the earth.

Lars Christensen, Norwegian explorer, sailed to new areas of the seas off Antarctica. He announced the non-existence of the Douglas Islands, supposed to be near the 64th meridian east of Greenwich and just south of the Antarctic Circle. In January, from a point near 87 degrees east longitude, and 66 degrees south latitude, he sent a plane aloft. Beyond the ice barrier to the south, the flyers sighted land which was named Princess Astrid Land.

A hitherto unknown, inactive volcanic crater, partly eroded, but with an original circumference estimated at 30 miles, was discovered in July by Father Bernard R. Hubbard, near the tip of the Alaska Peninsula. Father Hubbard's party, which carried on its work in coöperation with the National Geographic Society, also scaled for the first time the Aghileen Pinnacles, lofty peaks near the crater.

Greenland Crossed by British Sledge Party

Dr. Sven Hedin, Swedish explorer, found in a desert region of Chinese Turkestan, traces of the lost city of Edsina. A fresh-water lake, two miles long by one mile wide, heretofore known only to Indians, was discovered in Costa Rica in September. It was located from an airplane. The lake is near the Nicaraguan border.

The Greenland ice cap was crossed by dog sledge from Disco Bay, on the west coast, to Scoresby Sound, on the east coast, by a British expedition led by Martin Lindsay. Later the party pushed southward parallel with the coast for nearly 400 miles, traversing unexplored territory between Scoresby Sound and Angmagssalik (see illustration, next page).

The maze of water passages and adjoining islands in Tierra del Fuego, near the southern tip of South America, was explored in a 26-foot boat by Amos Burg on an expedition sent out by the National Geographic Society. Burg also rounded Cape Horn in his small craft.

An expedition of the California Institute of Technology rediscovered a chasm in a mountainous section of Chihuahua, Mexico, comparable in size and grandeur to the Grand Canyon of the Colorado. It was known only to Indians and a few miners. In British Guiana a 500-foot waterfall was found on the wedding day of the Duchess of Kent, and named Marina in her honor.

The 17,000-foot twin peaks of Mount Foraker, in McKinley National Park, Alaska, were scaled for the first time August 6. Mount Crillon, previously unconquered peak near the

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most desolate regions in the world, consisting of lava boulders and rocks, with many extinct volcanoes and not the slightest trace of vegetation. Thence it crosses the famous pilgrim railroad to Mecca and descends into the Valley of the Jordan. In 18 miles the pipe line drops from 2,700 feet above sea level to 850 feet below, presenting perhaps the greatest problem in pipe line construction in the history of crude oil transportation. After crossing the highly cultivated plain of Esdraelon, the line reaches the sea on the Bay of Acre, near the spot where the Crusaders made their last stand against Saladin and his Saracens, a few miles north of the modern port of Haifa.

To keep the thick oil in motion from Kirkuk to the sea, there are twelve powerful pumping stations, their positions depending upon the lie of the land. A revolving pipe cleaner is used to free the inside of the big tubes from debris. At certain points valves can be opened, the cleaner inserted, and then driven to the next valve by heavy pressure.

The annual "throughput" of the double line is expected to be about 4,000,000 tons. The pipe line will eventually pay for itself, saving both time and expense of ships which once had to sail around the Arabian peninsula, and, in addition, pay duties at the Suez Canal.

Note: For supplementary references see: "Changing Palestine," *National Geographic Magazine*, April, 1934; "The Road of the Crusaders," December, 1933; "From the Mediterranean to the Yellow Sea by Motor," November, 1932; and "Crusader Castles of the Near East," March, 1931.

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Photograph American Colony Photographers

A CRUSADER STRONGHOLD LOOKS DOWN ON A NEW OIL PORT

The frowning walls of Chateau Raymond (middle distance) in Tripoli until little more than a decade ago served as a Turkish prison. This Syrian town is the terminus of the northern branch of oil lines from the Mosul fields, in Iraq.

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Reindeer Herd Ends Six-Year Trek

ONE of the longest and most dramatic overland migrations in recent times came to an end on Christmas Day when a great herd of 3,000 reindeer reached the frozen wastes of the Mackenzie Delta, near the northwestern corner of Canada.

For six years the hardy beasts had been lead along a 1,200-mile trail from southern Alaska, through blizzards and over lofty mountains, in order that the Eskimos of the Yukon and Northwest Territories might have a means of supporting themselves in a desolate region where ordinary draft animals cannot live.

The average American probably considers the reindeer only as a picturesque feature of an otherwise drab Arctic landscape, as a decoration on a Christmas card, or as a draft animal for fur-clad foreigners.

Now Staple Livestock

But up near the Arctic Circle, both in Alaska and near-by Yukon, reindeer are to-day what cattle are to the dairy farmers of the Netherlands, humble sheep to the Australian wool raiser, or bulky shorthorns to the Texas cowpuncher—utility unconnected with very much romance.

Within a couple of generations "Cupid" and "Vixen" and "Comet" and "Prancer," those legendary companions of ruddy Saint Nick, have become the staple livestock of the Far Northwest. Santa Claus may use a streamline plane in making deliveries to the modern child, but in Alaska the reindeer has made a place for himself as a hauler of the necessities of daily life.

In northern Europe and Asia the reindeer has been partly tamed and forced to lend a hand in man's work since earliest times. Not so in America, where native species of the family, the Cervidae, are known as caribou, and are still wild.

The reindeer mentioned in recent dispatches from the North trace relationship to the first herd imported into Alaska, at Teller, on July 4, 1892. The herd was slowly enlarged by later importations, both from Siberia and from Norway.

Many Killed for Food and Skins

From the outset the deer thrive, and as the number increased, other herds were formed and driven inland. Many have been killed by Eskimos for food and skins, but still the herds grow.

The reindeer, however, does not have many young. One fawn a year is about the average per female. The rapid increase of the herds is due to two facts: (1) the remarkable hardiness of the fawns, which only a few hours after birth are strong and able to run; and (2) the early age at which reindeer take on mates and begin to bear young. Extreme cold rarely kills off the young.

Another factor that must be considered, however, is the attention given new herds in Alaska. A sharp lookout is kept for strayed or lost animals, and for wolves, lynx, and other animals that prey on fawns.

Grazing Land for Millions

The reindeer is one of the most particular animals in the selection of its food. It pastures during the summer on tender mosses, lichens, mushrooms, algae, and grasses. Its typical home is Lapland. In the Lapp tongue the word "rein" means pasturage. During the long winter months the deer subsist entirely upon a dry moss, which abounds in certain tundra regions of the earth.

It has been estimated that there are 200,000 square miles covered with this

Alaskan coast a hundred miles northwest of Juneau, was climbed on July 21 by Bradford Washburn and his Harvard-Dartmouth Expedition. The mountain is 12,727 feet high.

In March, Polish explorers, led by M. K. Markiewicz-Jodko, found a new route to the top of 22,834-foot Aconcagua in the Andes, highest mountain in the Western Hemisphere. In the Himalayas, E. E. Shipton and companions made the first exploration by Westerners of the slopes of Nanda Devi, marking out possible routes for a future attack on the peak itself.

One of the most spectacular archeological discoveries of the year came in March when two French aviators flew into the interior of Arabia northeast of Yemen, and sighted and photographed from the air the ruins of a great city previously unknown to the West.

The remains of seven Mayan cities, one surrounded by a moat, were discovered in northern Guatemala by expeditions of the Carnegie Institution of Washington.

Note: For additional references and pictures of places and explorers mentioned in connection with the 1934 explorations see: "A Half Mile Down," *National Geographic Magazine*, December, 1934; "Exploring in the Stratosphere," October, 1934; "Flying Around the North Atlantic," September, 1934; "The National Geographic Society's Map of the Antarctic," October, 1932; "World inside a Mountain," September, 1931; and "Conquest of Antarctica by Air," August, 1930.

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Photograph by Charles and Anne Lindbergh

STRANGE HEADDRESS OF A SELDOM-VISITED GREENLAND PORT

Eskimos of Angmagsalik, along the big island's inhospitable east coast, which was visited last year by an expedition which crossed the ice cap by dog sledge. Because of icebergs, sometimes four years pass before a steamer can enter the land-locked harbor.

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1934 Saw Marked Changes in World's Governments

CHANGES great and small affected the status of many governments, areas, and cities during 1934. Among the most important of the year's government changes was the rise in Europe of two "corporative States"—Austria and Italy.

Austria also appeared repeatedly in the world's front page news during the year because of civil strife. Beginning February 12, battles were waged for several days in Vienna and in some of the provinces between government forces and Socialists. All Socialist and Trade Union bodies finally were suppressed. In June a new corporative constitution was adopted by decree of the Cabinet. The title of the State was changed from "Republik" to "Bundes-staat" (Federal State). Shortly after the new constitution went into effect, Chancellor Dollfuss was assassinated, July 25, by a band of Austrian Nazis.

Preparations for changing Italy to a corporative basis have been in progress by the Fascist Party for years. The new Council of Corporations was inaugurated November 10.

German State Diets Abolished

Reshaping of the German State continued during the year. On January 30 the Reichstag passed a bill abolishing the separate State diets and placing the States and their governors under control of the Central Government. On the death of President Hindenburg, August 2, the offices of President and Chancellor were merged, and the duties of both were placed on the shoulders of Adolf Hitler.

The only international wars of importance during 1934 were the Chaco war between Bolivia and Paraguay, and a conflict between Saudi-Arabia and Yemen. The former is still in progress. The Arabian war, which began in March over a boundary dispute, was ended in May by a treaty of friendship and coöperation, stipulated to last 20 years.

Civil wars were in progress at times during the year in Austria, Spain, and China. In Spain, on October 6, Catalonia declared itself independent of the Spanish Republic, and armed uprisings occurred in other parts of the country. All were put down after severe fighting.

China had uprisings at various periods during the year from the coast to Chinese Turkestan, but they had little effect on the main government of the huge area, which is centered at Nanking.

A new empire took shape in 1934 when Kang Teh (known popularly as Pu-Yi) was enthroned, March 1, as Emperor of Manchukuo. Also in Asia, one of the world's strangest rulers came into being, a new Dalai Lama for Tibet. A baby born at the time of the death of the preceding Dalai Lama, in December, 1933, was chosen in January, 1934, and will be reared in a monastery as the future ruler.

Leticia, small village in the upper Amazon basin, dispute over which almost caused a war between Peru and Colombia, was adjudged to belong to Colombia and was placed in possession of that country June 19, after a year of control by a League of Nations Commission.

Spanish troops in April formally occupied the territory of Ifni on the Atlantic coast of Morocco, allotted to Spain in 1860. Italy received, on July 20, more than 35,000 square miles of territory in Africa from Great Britain and Egypt. The territory forms a southward addition to the southeastern corner of Libya.

On February 16, Newfoundland temporarily surrendered her status as a self-governing Dominion of the British Commonwealth of Nations, and passed under the government of a commission appointed by the crown. The veto power of the British king was abolished in South Africa after November 19, in regard to laws assented to by the Governor General.

U. S. Drops Control of Haiti

The United States gave up control of Haiti August 1, putting an end to occupation by Marines that lasted 19 years. By treaty the United States, on June 9, abrogated the "Platt Amendment" which had given the right to intervene in Cuban affairs. As a result Cuba was established as a completely independent country.

Three countries became new members of the League of Nations: the Union of Soviets, September 18; Afghanistan, September 26; and Ecuador, September 28.

In some form, Fascism and dictatorship marched forward in three additional countries of Europe. Estonia took its first step toward dictatorship January 24, when a president took office with temporary power little checked by a reduced parliament. In October a virtual dictatorship was established. The Free City of Danzig passed under local Nazi control February 6.

By a coup d'état, a dictatorship under the king was established in Bulgaria May 19, and parliament was abolished. On June 18 it was announced that there would be government by decree for one year, after which a reformed parliament will be established, two-thirds of the membership representing "corporations," one-third elected.

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brittle, coral-like moss in Alaska and near-by Yukon—enough grazing land for more than 10,000,000 reindeer. This class of pasturage is suitable for no other animal, except, perhaps, the musk-ox; hence these thousands of square miles of tundra, were it not for the reindeer, would prove valueless and could not be peopled.

Reindeer seek the sea coast in summer, both to escape swarms of mosquitoes that annoy them and to lick up salt deposited by ocean waters. The Lapps have a saying that "mosquitoes are the best herders in summer."

Herders can persuade the animals to overcome their inbred instinct to seek seaside "resorts" in warm months however, by providing salt and leading their herds to breezy hillsides where mosquitoes do not abound.

Note: See also "On Mackenzie's Trail to the Polar Sea," *National Geographic Magazine*, August, 1931; "To-day on 'The Yukon Trail of 1898,'" July, 1930; "The Camel of the Frozen Desert," December, 1919; and "Reindeer in Alaska," April, 1903.

Bulletin No. 3, January 14, 1935.



Photograph by Lomen Brothers, Nome, Alaska

THE REINDEER IS NOW VERY MUCH AT HOME IN ALASKA

Imported to supply the Alaskan, both white and Eskimo, with food, clothing and means of transportation, the hardy animals have multiplied until it has become possible to send large herds of them into new territory, including near-by Yukon.

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The Great Barrier Reef, Jig-saw Puzzle of Australia's Coast

AUSTRALIA'S Great Barrier Reef, long regarded chiefly as a menace to ships, is rich in natural resources. A recent survey of this largest coral reef in the world shows that it possesses untold wealth in pearl shell (which may be made into buttons), turtles, food fish, oysters and sponges. Phosphates, guano and lime from coral are also possible sources of income.

If the sea went dry along the east coast of Queensland, in northeastern Australia, a thousand miles of coral "maze" would be revealed.

The Great Barrier Reef of Australia must not be imagined as a single structure, however, like the Great Wall of China; it is formed by myriad reefs, and a map of just one section resembles a jig-saw puzzle. In addition there are the scattered isles, high and forested, of the inner zone, and the atolls and cays, which are true coral islands.

Nature and Origin Still Half-Veiled in Mystery

In all the Seven Seas there is nothing so wonderful as this vast submarine "curtain" of coral, the largest coral reef in the world, whose nature and origin remain half-veiled in mystery.

Tourists from many lands and thousands of Australians have made the voyage through "Australia's Grand Canal," the area between the mainland, with its purple hills, and the Outer Barrier. A calm and pleasant trip during a portion of the year, it may be perilous in the cyclone season.

Many launches and fishing craft have been wrecked among the coral, or gone down in the heart of a storm within the Barrier. But navigation is no longer the nightmare it was to the early voyagers, before the reef mazes had been mapped and routes safe for even large vessels discovered.

Majestic is the meeting of league-long rollers of the ocean and the Great Barrier. On days when the sunlit water behind the coral bastion is calm enough for a canoe, mountainous waves pound the reefs unceasingly. The surf on the Outer Barrier at high tide, when the broad reefs' crests are hidden, presents an amazing spectacle. A "long line of boiling surf, springing up in mid-ocean without any apparent cause," is the late naturalist Charles Hedley's description.

Southern Limits of the Reefs

Swain Reefs, far south, mark the beginning of the Great Barrier Outer System. Farther north, the linear reefs are developed. They are some miles in length and up to half a mile across, with broad separating channels (see map, next page).

A lighthouse on Lady Elliot Islet marks the southern limit of coral-formed land, "a broad platform of solid coral, half a mile in circumference." Then comes an archipelago, the Bunker Group, followed by the Capricorn Group, popular resort now of naturalists, and almost a picnic ground for holiday-makers from the mainland.

The Grand Canal varies in width from 20 to 80 miles. There are two regions, however. The inner one is narrow and fairly free from the perils which make the outer zone impossible for shipping. Only small craft are navigated among the reefs of the outer zone.

Luggers are sailed along the channels, with coral fangs threatening destruction

Five new pacts, signed during the year, altered the political relations of Europe. A "Balkan Pact" guaranteeing frontiers was entered into February 9 among Romania, Yugoslavia, Greece, and Turkey. A "Baltic Pact" signed September 2 bound Estonia, Latvia, and Lithuania for the coordination of their foreign policies. Italy, Austria, and Hungary reached an agreement March 17 to consult on matters of common interest. Hungary and Poland signed a "culture treaty" October 21; and a similar pact was entered into by Bulgaria and Yugoslavia.

An agreement of far-reaching importance was signed December 3 between Germany and France, outlining political and economic steps to be taken in the Saar Basin following the plebiscite, January 13, 1935. The Council of the League of Nations provided on December 6 for the first "world police force" to maintain order during the Saar plebiscite. It consisted of British, Swedish, Italian and Netherlands soldiers.

In September, Japan and the Soviet Union signed a treaty regulating joint use of waterways on the common borders of Manchukuo and far eastern Russian territory.

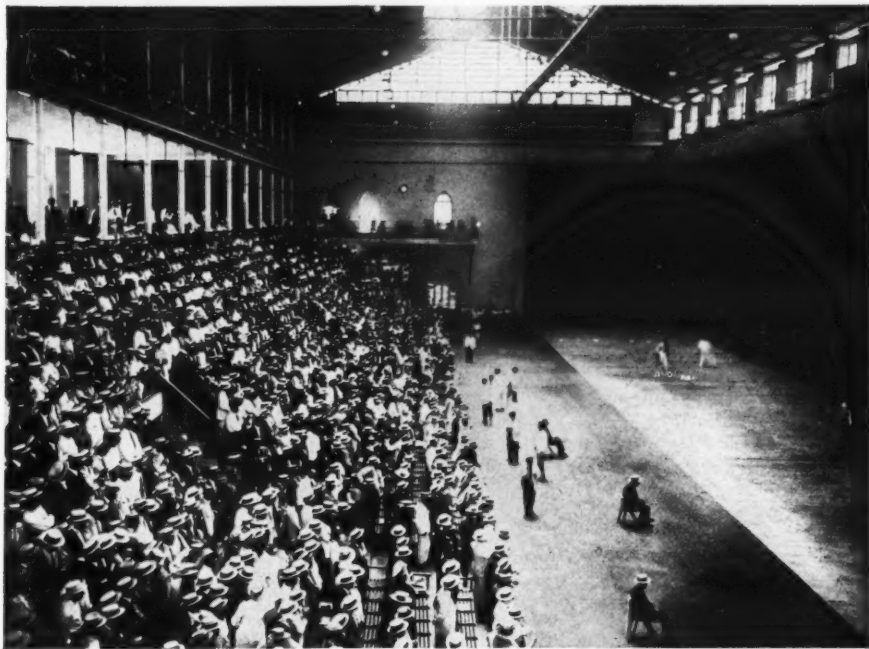
Steps for the establishment of three new capitals were taken during 1934. The cornerstone of the Government House for Northern Rhodesia, Africa, was laid April 3 in Lusaka, which will be a planned city. The new capital will replace Livingstone. The capital of the Ukraine Republic, Soviet Union, was moved from Kharkov to Kiev, June 24. A temporary capital of the Autonomous Government of Inner Mongolia was set up at Pailingmiao in June.

Italy inaugurated on December 18 a new province, the 93rd of the major divisions of the country. It is Littoria, made up of land reclaimed from the Pontine Marshes between Rome and Naples. The Sultan of the Maldives Islands, in the Indian Ocean, was deposed by Great Britain in October.

Assassination of King Alexander of Yugoslavia October 9 led to expulsion of thousands of Hungarians from Yugoslavia early in December. For a time war between Hungary and Yugoslavia threatened.

On September 14, the Soviet flag was raised over Herald Island, a tiny bit of land in the Arctic Ocean, east of Wrangel Island. Andorra, among the smallest of independent countries, made a change in its official name during 1934. The General Council decreed early in June that the name "Republika d'Andorra" be replaced by "Les Valls d' Andora."

Bulletin No. 4, January 14, 1935.



Photograph by American Photo Studios

CUBA THRILLS TO THE JAI-ALAI

This Basque game is said to be the fastest in the world, and has been adopted by the Cubans as their national pastime. Cuba entered into a new era of friendly understanding with the United States last year, when the Platt Amendment, giving us the right to intervene in Cuba's affairs, was ended.

—sailed often where the reefs are uncharted, in the quest for sea slugs and pearl and trochus shell. Japanese own many of these venturesome craft.

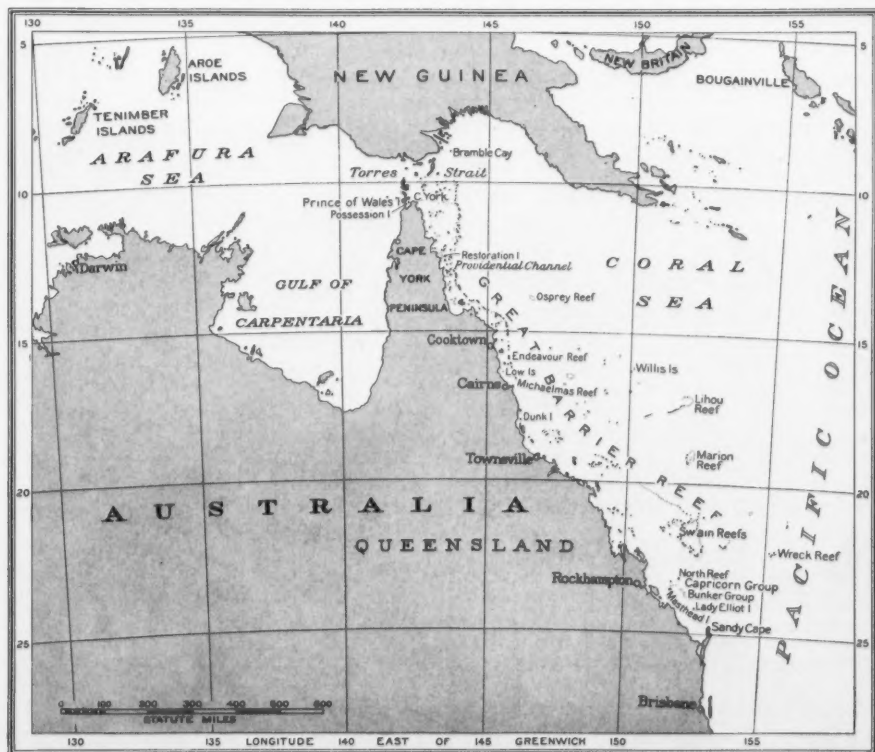
The depth of the sea outside the Great Barrier is profound, but in the zone where coastal steamers go safely it varies from about 10 fathoms to 20; the outer zone is much deeper, up to 70 fathoms (420 feet).

There is charm in the Grand Canal trip, and life is pleasant on the favored islands, where a bungalow may nestle amid tropical fruit trees and palms, with a creek singing near on its little journey to the sea. Men have lived half a lifetime on a Barrier Reef isle without desire to wander. It may be a lotus-eating life, or one of healthy work and play, as you please.

Romance among the reefs there is, and one sees relics of the old-time voyagers recovered from the sea. But treasure seekers, imagination fired by stories of lost galleons, were better employed seeking on "pirate islands" than among the coral of the Great Barrier. Coins have been found, Spanish ones, too; yet, in these waters, it is far more profitable to go pearl-fishing than diving for "fairy gold."

Note: See also "Shark Fishing—An Australian Industry," *National Geographic Magazine*, September, 1932; "Koala, or Australian Teddy Bear," September, 1931; "The Great Barrier Reef and Its Isles," September, 1930; and "Lonely Australia," December, 1916.

Bulletin No. 5, January 14, 1935.



Drawn by James M. Darley

THE GREAT BARRIER REEF SHELTERS AND ISOLATES QUEENSLAND

Like a long flotilla of besieging warcraft, the vast chain of reefs, atolls, and cays extends along the northeast coast of Australia. Although it is a menace to mariners, the Barrier Reef possesses a wealth of button pearl, coral and sea life, and many problems yet to be solved by men of science.

